EASTERN RESEARCH GROUP, INC.

MEMORANDUM

TO: Jim Eddinger, U.S. Environmental Protection Agency

FROM: Ruth Mead and Tom Waddell, Eastern Research Group, Inc.

DATE: October 27, 1997

SUBJECT: Final Minutes of September 18 and 19, 1997, ICCR Solid Waste Definition Subgroup Meeting

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## 1.0 INTRODUCTION AND PURPOSE OF MEETING

The second meeting of the Solid Waste Definition Subgroup was held on the evening of September 18 and morning of September 19, 1997, in Durham, NC. Attendees are listed in attachment 1. The agenda is contained in attachment 2.

One purpose of the meeting was for members to better understand the proposed comparable fuels exclusion and other exclusions that are contained in the Part 261 definition of hazardous solid waste. The other purposes were to continue discussions on how to structure a definition on non-hazardous solid waste for purposes of Section 129 of the Clean Air Act, and to start building general agreement on materials that can be considered fuels instead of wastes. Ultimately, the subgroup will make recommendations to the ICCR Coordinating Committee on the definition of non-hazardous solid waste.

## 2.0 DISCUSSION

The discussion is summarized according to the following topics:

- presentation on proposed comparable fuels exclusion
- presentation on existing exclusions in part 261

- discussion of role of simplicity, clarity, and cost of regulation and "hot buttons" on waste definition
- discussion of "what is a fuel?"
- suggestions of materials to be considered fuels

2.1 Presentation on Proposed Comparable Fuels Exclusion

Mary Jo Krowlewski, of EPA/OSW, made a presentation on the proposed comparable fuels exclusion (61 FR 17459-17469 and 17529, April 19,1996). Her presentation is contained in attachment 3. She commented that for the final rule, EPA is currently leaning toward a composite benchmark based on liquid fuels (gasoline and #2, 4, and 6 oils). OSW did not pursue an exemption based on solid fuels (e.g., coal) because of concern about metal and halogen levels. She noted that EPA is leaning away from having a flash point specification because commenters have stated that Department of Transportation rules would address this. EPA is leaning toward having maximum viscosity and minimum heating value criteria.

In answer to a question on how many fuel samples were analyzed to set benchmarks for constituents, Ms. Krowlewski replied that there were approximately 27 fuel samples from across the United States. They were analyzed for approximately 250 constituents. She noted that many compounds were not detected, and in these cases EPA specified allowable detection limits. She informed the group that a notice has just been put in the Federal Register about the availability of additional data on halogens in fuel oil.

Ms. Krowlewski explained that there are recordkeeping and reporting requirements to qualify for the exclusion. A subgroup member asked if documentation was needed on a material basis, a stream basis, or a facility basis (e.g., if six facilities produced the same waste material). Ms. Krowlewski required that each facility would need to document each stream that meets the exclusion criteria.

A subgroup member asked if the solid waste definition subgroup could use different specific exemption criteria for purposes of non-hazardous solid waste than those proposed for hazardous solid waste. Fred Porter of EPA replied that the subgroup is free to consider different criteria. For example, they may want to consider criteria that could be applied to solid materials

as well as liquids. In response to a question, Ms. Krowlewski agreed that OSW took a conservative approach in part 261 because they were dealing with hazardous wastes.

2.2 Presentation on Existing Exclusions

Mary Beth Clary, of EPA/OSW, stated that at the previous meeting, she was asked why OSW is concerned with the burning of waste materials for energy recovery. She reported that she looked into the statutory language and previous Federal Register notices. First, Congress directed EPA to promulgate regulations for facilities that produce fuel from hazardous waste recovery in Section 3004(g) of the RCRA statute. This was a 1984 amendment. Second, EPA further explained its intent in the November 29, 1985 Federal Register (50 FR 49166-49167):

"Normally, the purpose for which a material is burned makes no difference in environmental effect. Hence, EPA envisions an ultimate regulatory scheme where regulation of burning applies (as may be necessary to protect human health and the environment) regardless of purpose in all situations within the Agency's jurisdiction... There are certain situations where control of burning for material recovery in industrial furnaces could lead to an impermissible intrusion into the production process and so be beyond EPA's authority under RCRA. These situations are limited, and involve circumstances where the secondary material contains the same types and concentrations of constituents (particularly hazardous constituents listed in appendix VIII of part 261) as the raw materials normally burned in the industrial furnace."

Ms. Clary then discussed the part 261 exclusion that "commercial chemical products (CCPs) are not solid wastes if they are themselves fuels" [40 CFR 261.2 (c) (2) (ii)]. She handed out a table summarizing EPA interpretations of this exclusion (see attachment 4). The table lists materials that EPA has determined are fuels, and not wastes, when burned for energy recovery. The table describes the context of each determination, and gives citations to Federal Register notices or EPA correspondence documenting each determination.

A committee member asked how the commercial fuels exclusion is implemented and what type of recordkeeping or reporting is required. Ms. Clary explained that the definition of solid waste simply excludes commercial fuels. They are not subject to part 261, and no recordkeeping or reporting is required. However, in case there was an inspection or questions were raised, a facility would want to have a rationale for why they believe the material is a fuel. The exclusion only covers materials whose original intended purpose is fuel.

A member suggested that the subgroup should discuss exempting commercial fuels from the definition of solid waste for section 129.

2.3 Discussion of Simplicity, Clarity, and Cost of Regulations and "Hot Buttons" on Waste Definition

Subgroup members discussed the importance of developing a simple and clear definition. An environmental organization representative emphasized that the definition needs to be very clear and understandable and have a strong rationale; otherwise, it will look like an attempt to evade regulation and will raise a red flag for the public. Complex exclusions may seem like evasion. For example, when industries started burning hazardous wastes in cement kilns and calling it "recycling", this angered the public and caused distrust.

The same member reported that in previous discussions on solid waste definitions in California and in OSW meetings, industries were very concerned that if the definition was not clear, a company might believe that a material was not a waste and later find out that it was a waste and that they had violated a hazardous waste law and were subject to severe penalties. Such uncertainty would be costly.

Several industry representatives agreed with the environmental community's desire for clear, understandable regulations. Two members noted that this topic is quite complex because of the wide range of materials, combustion devices, and processes included in the ICCR. The subgroup should strive for simplicity, but should recognize that it may not be possible to write a very simple, short definition. The subgroup should strive for clarity, consistency, and fairness in developing criteria for what should be considered fuels versus solid wastes.

An industry representative, who is also a member of a local environmental board, stated that the part 261 approach of classifying all materials as wastes and then "exempting" some is a hot button issue. He reported that after the September 4 subgroup meeting, he went back to his community board and asked whether they would worry if a material was classified as a waste but got an exemption. They said yes. He then asked what if the material was natural gas? They asked why you would call natural gas a waste to begin with. A representative of the wood furniture industry commented that wood has been burned as a fuel at furniture plants in his county

for over 100 years. If you suddenly called wood a waste, the local public would ask why. His community, including local environmental advocates, perceive that wood has always been a fuel and it does not seem logical for the ICCR process to try to make it a waste. Another member noted that there may be a difference between clean wood and chemically treated wood such as railroad ties. Members wondered if there was a way to clearly define fuels as opposed to solid wastes up-front rather than using an "exemption" approach.

A member commented that in the ICCR, EPA will regulate emissions from combustion of both wastes and fuels (under sections 129 and 112, respectively). Therefore, the ICCR solid waste definition is different from the RCRA hazardous waste definition is that fuels and similar materials that may be excluded from the solid waste definition will not escape regulation.

### 2.4 Discussion of "What is a Fuel?"

To begin the discussion, one subgroup member suggested that a line be drawn between "fuel" and "nonhazardous solid waste" using simple criteria, then specific fuels could be listed that do not fit the criteria. Another member asked how the U.S. Department of Energy (DOE) defines fuel. Marv Schorr volunteered to provide the DOE definition under PURPA by the next subgroup meeting. The group then discussed possible criteria for defining fuels and the impact the definition could have when developing regulations under sections 129 and 112.

#### 2.4.1 Criteria for a Definition of "Fuel"

The following criteria for distinguishing fuels from solid waste were offered:

- something you burn to get heat and recover useful energy (as opposed to something you burn for disposal),
- a material is more like a fuel if it is bought versus paying someone to take it,
- look at historical or common use--what has always been used as a fuel,
- what has been discarded but picked up by someone else as a fuel,
- a material burned in a controlled combustion environment,
- a material manufactured for the fuel market,

- fuels tend to be more homogeneous and have more consistent, predictable emissions than waste, and
- consider beneficial use in determining what is a fuel.

Jim Eddinger handed out tables on coal and fuel oil composition data from a previous EPA study (attachment 5). Jeff Shumaker also reminded members of the table he presented at the September 4 meeting.

The subgroup discussed the potential criteria suggested by members, but did not attempt to reach consensus at this meeting. One subgroup member stated that historic use should not be a criterion, because some materials that could not be burned historically can now be burned efficiently (e.g., anthracite culm and bituminous gob). Another member was uncomfortable with the phrase "controlled combustion environment as a primary criterion, stating that it is too subjective--a tepee burner is a controlled combustion environment.

The need for consistency was raised as a concern. It was felt that the public would be confused if the same material could be a waste or a fuel. It was recognized, however, that this situation is unavoidable is some cases. A subgroup member suggested that the group define waste instead of fuel, since some wastes can be burned as fuel.

The following preliminary draft language was agreed upon as a starting point: "Solid waste is sludge, garbage, refuse, and any discarded material that is burned. Fuels burned to recover energy are fuels and not solid waste." The definition would continue by further defining fuels using criteria and a list. This definition is generally consistent with the RCRA statutory definition, and including "any discarded material that is burned" is generally consistent with the part 261 definition.

### 2.4.2 Regulation of Sources Under Section 112 vs. Section 129

An industry representative asked for clarification of the concerns of the environmental community on the issue of developing a definition of nonhazardous solid waste versus fuels. A representative of the environmental groups stated that they care about HAPs emissions and not

about whether a material is called a fuel or waste. The public will be concerned about high-HAPs (e.g., mercury and dioxin) materials.

Industry representatives explained that the issue of covering materials under section 129 versus section 112 must be addressed because of the public perception that waste burning is "bad" but fuel burning is "OK". Industry can't live with everything being designated a waste because of this public perception. Sudden redesignation of what has been considered a fuel to be a waste would create problems.

An environmental representative suggested that all sources be covered under section 129-like regulations, including major and area sources, which should accommodate industry concerns over waste vs. fuel, section 129 vs. section 112 designations. Representatives of EPA were asked whether the same type of requirements under section 129 (i.e., operator training, good combustion practices, siting, capturing small sources, etc.) could be implemented under section 112. Leslye Fraser and Fred Porter of EPA explained that MACT rules, including emission limits, are required for major sources, but EPA is obligated to assess the need for controlling area sources also. Small (i.e., area) sources can be controlled by MACT or generally available control technology, if EPA determines this to be appropriate. Small sources could also be captured by lowering the major-source thresholds below the 10/25-ton cutoffs if that is deemed appropriate. Also, mechanisms are available to require both an emission limit and a work practice standard if that is important to the control of emissions.

One subgroup member expressed a concern about trying to do too much at one time. If regulation of area sources would delay requirements for major sources, it might be better to consider them later. Regardless, the decision should be left to the work groups; it is outside the scope of this subgroup. Several members felt that the understanding that small sources will be assessed and operating practices will be considered in developing section 112 regulations is very important in arriving at subgroup recommendations on the definitions of wastes and fuels. They suggested that this should be communicated along with the recommendations.

An environmental representative requested that EPA draft a memorandum to the work groups outlining the requirements and options available under section 112, and the need for

affirmative action on the part the work groups to accomplish them. Leslye Fraser stated that EPA would consider the best way to communicate these ideas and will respond in some form.

### 2.5 Materials Proposed As Fuels

Each subgroup member was given the opportunity to suggest materials that should be listed as fuels and exempted from the definition of nonhazardous solid waste when these materials are burned for energy recovery. The following list comprises the suggestions and the corresponding rationale offered by the subgroup members.

- Wood materials with natural levels of halogens: historically a fuel; tests suggest wood is clean burning; many materials in this category; if burned well, it doesn't produce dioxins.
- Coal refuse (e.g., culm and gob): essentially coal mixed with rock from mining; reclamation has other environmental benefits.
- Dried wood material, except if chemically treated: test data show that it is an excellent fuel with low HAP content.
- Natural gas.
- Gas from coal gasification: produced to be used as a fuel; CO and $H_2$ are its components, and it doesn't produce HAPs.
- Clean, dry woods with no chemical treatment or pigments: allowed to be opened burned in non-incorporated areas of Ohio.
- Fossil fuels (e.g., coal): historical use as fuels.
- Landfill gas: relatively clean.
- Bagasse: historically designed into sugar mill operation from beginning; part of sugar cane; natural material--mostly cellulose and woody material; fairly homogeneous and predictable; beneficial for global warming; economic value; State of Florida regulates bagasse as carbonaceous fuel.
- Process engineered fuel: manufactured for the fuel market; predictable emissions; conserves resources; good heating value; reduces greenhouse gas emissions by replacing fossil fuel.

- Non-hazardous oil or liquid hydrocarbons recovered from petroleum refining and petrochemical processes that are reprocessed or burned to recover energy: these are fuels, have properties of fuels, or are constituents of fuels.

- Propane: widely used as a fuel.

- Black liquor (lignin from digested trees and chemicals): burned to recover chemicals (sodium, calcium, sulfur) and produce heat; exempt from RCRA. (There are a number of analogous process-related combustion practices in various industries.)

- Biomass (e.g., timber, trees and tree materials, agricultural and vegetable wastes, grains and nut shells): many of the same reasons as for bagasse.

- Distillate oil (#2, #4, #5, #6): common, historic fuels.

- Petroleum coke: sold as fuel; widely used.

- Pre-consumer (i.e., off-spec.) paper: clean; high Btu content.

- Hydrogen: clean; high Btu content; sold as fuel.

- Gasoline, diesel fuel, jet fuel, and kerosene: sold as fuel.

- Uncontained process gas: uncontained gas is not a solid waste; similar reasons to liquid hydrocarbons recovered from petroleum refineries.

- Tire derived fuel.

## 3.0 ACTION ITEMS

- Marv Schorr will provide information on the DOE definition of fuel by the next subgroup meeting.

- EPA will decide how to communicate to the work groups on information on requirements for assessing small sources under section 112 and options available for developing regulations under section 112 that are similar to those under section 129.

- Members who listed materials that they consider to be fuels should provide available information on the characteristics of the materials.

- EPA will e-mail the lists of potential fuels and associated rationales from today's meeting to all subgroup members by September 23.

- Jeff Shumaker will e-mail EPA the summary table of potential fuels he passed out at the previous meeting so EPA can e-mail it to subgroup members.

- All subgroup members will e-mail to Jim Eddinger whether they consider each of the listed materials to be fuels or wastes and their concerns by September 30. EPA will compile and distribute the results.

- Members should also submit suggestions for criteria for use in the fuel definition by September 30. EPA will forward these suggestions to all subgroup members.

## 4.0 NEXT MEETING

The next meeting is October 14, from 9 a.m. to 4 p.m. at the EPA facility in Waterside Mall, Washington, DC. Agenda items are:

- Review DOE and FERC waste fuel definition materials

- Define fuel

- Test draft fuel definition to see if it works with a range of materials and situations.

**These minutes represent an accurate description of matters discussed and conclusions reached and include a copy of all reports received, issued, or approved at the September 18 and 19, 1997, meeting of the Solid Waste Definition Subgroup. Jim Eddinger, EPA.**

Attachment 1

Attendance List

# Attendance List

Subgroup Members

David Cooper

Jim Eddinger

Chuck Feerick

Frank Ferraro

Mike Fisher

Dick Van Frank

Andy Roth

Marv Schorr

Jeff Shumaker

Mike Soots

Jane Williams

Observers

Jan Connery (facilitator)

Charles Case

Mary Beth Clary

Andy S. Counts

Barton Day

Leslye Fraser

Mary Jo Krowlewski (by telephone)

Ruth Mead

John Ogle

Fred Porter

Tom Waddell

Attachment 2

Draft Agenda for September 18 & 19 Meeting

Solid Waste Definition Subgroup Meeting

September 18 and 19, 1997

OMNI Hotel, Durham, NC

Thursday, September 18

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|---|---|
| 7:00 pm - 8:00 pm | Primer and questions on comparable fuels exclusion and existing exclusions in part 261 |
| 8:00 pm - 9:00 pm | Discuss role of simplicity and clarity in cost of regulations<br>Discuss "hot buttons" on waste definition |

Friday, September 19

| | |
|---|---|
| 7:30 am - 9:45 am | Discussion of "What is a fuel?" (including table handed out at September 4 meeting) |
| 9:45 am - 10:15 am | Break |
| 10:15 am - 11:30 am | Develop consensus on fuel list or series of questions |
| 11:30 am - 12:00 noon | Review of Flash minutes<br>Action Items<br>Agenda for Next Meeting |
| 12 noon | Adjourn |

Attachment 3

Presentation on Comparable Fuels Exclusion

## COMPARABLE FUELS

The Exclusion:

- EPA is excluding from the definition of solid waste, hazardous waste-derived fuels that meet specification levels comparable to fossil fuels for concentrations of toxic constituents and physical properties that affect burning.
- The exclusion would apply at the point of generation and the generator would have to comply with notification, certification, and recordkeeping requirement that document that the comparable fuel has been combusted.
- EPA is using a "benchmark approach" to identify a specification that would ensure that constituent concentrations and physical properties of excluded waste-derived fuel are comparable to those of fossil fuels.

Rationale:

- Excluded waste-derived fuel is similar in composition to commercially available fuel and therefore poses no greater risk than burning fossil fuel.
- If a hazardous waste-derived fuel is comparable to a fossil fuel in terms of hazardous and other key constituents and has a heating value indicative of a fuel, EPA has discretion to classify such a material as a fuel product, not a waste.

Benefits:

- Support for the RCRA statutory goal of promoting beneficial energy recovery and resource conservation;
- Reduction of unnecessary regulatory burden and allowing parties to focus resources on higher permitting and regulatory priorities; and
- Demonstration of common-sense approach to regulation.

The Benchmark Approach:

- Not a risk-based approach: Encountered several technical and implementation problems using a purely risk-based approach to develop a national rule (too many facility types and locations).

- To define the specification, EPA determined the concentration of hazardous constituents in various benchmark fuels: No. 2, 4, and 6 fuel oil and gasoline.

- Final rule will be based on one of the several options presented at proposal. The options range from developing a suite of comparable fuel specifications based on individual benchmark fuels (i.e., gasoline, No. 2, No. 4, No. 6 fuel oil) to basing the specification on composite derived values derived from the analysis of all benchmark fuels.

Selection of Benchmark Fuels:

- EPA considered a range of fuels upon which to base its benchmark fuel selection, including gases, such as natural gas and propane, liquids (such as gasoline and fuel oils), and solids (such as coal, coke, and peat).

- Not including solid fuels: From an environmental standpoint, an exclusion from RCRA subtitle C regulation should not be based on fossil fuels that have high levels of toxic constituents that will not be destroyed or detoxified by burning (e.g., metals and halogens).

- Not including gas fuel: Gas fuel would be overly conservative and have no utility to the regulated community.

- Using liquid fossil fuels because they are widely used by the industry, readily combusted, and do not present the inconsistencies of solid or gaseous fuels.

The Specification:

Chemical constituents:

- Covers: all part 261, appendix VIII constituents, CAA metals, and total nitrogen and halogen

- Maximum allowable concentration in a comparable fuel would be the concentration detected in the fossil fuel; or

- "Non-detect" with the non-detect level set as the maximum allowable detection limit: or

- For pure hydrocarbons and for total nitrogen and halogens, either the detection limit or the concentration from the fossil fuel would be the maximum allowable concentration in the fuel.

Physical specifications:

- Viscosity, heating value, and flash point

Implementation:

- One-time written notification and comply with the requirements of the specification.

- Sampling and analysis would allow the use of process knowledge.

- No blending allowed to meet the specification.

- Blending to meet the viscosity would be allowed after constituent specifications have been met.

- The comparable fuel must be burned in regulated stationary sources.

- Bona-fide treatment to meet the specifications would be allowed.

Attachment 4

Table on Interpretation of Existing Exclusion for Fuels

## Existing Exclusion for Fuels

How EPA has interpreted "commercial chemical products (CCPs) are not solid wastes if they are themselves fuels" (40 CFR 261.2(c)(2)(ii))

I. Materials determined to be fuels and therefore, are not solid wastes when burned for energy recovery.

| Secondary material | Context | Reference |
|---|---|---|
| Benzene, toluene, and xylene | CCPs such as benzene, toluene, and xylene are not considered to be wastes when burned as fossil fuels because normal fossil fuels can contain significant fractions of these chemicals and these chemicals have a fuel value. | April 19, 1996; 61 FR 17459 (Proposed HW Combustor MACT rule) |
| Pipeline interface generated from the transport of toluene | Listed CCPs are not solid wastes (SW) when burned for energy recovery if they are themselves fuels or normal components of commercial fuels. | November 29, 1985; 50 FR 49168 (Final Used Oil Rule) |
| Gasoline | When gasoline (or any CCP) is discarded, it is subject to regulation as a hazardous waste (HW). But when a commercial chemical fuel is recycled (e.g., mixed with used oil and burned for energy recovery), it is not considered to be discarded and so is not a HW. | November 29, 1985; 50 FR 49168 (Final Used Oil Rule) |
| Fuels | For the prohibition on burning HW or any fuel containing a HW in a cement kiln in a populated area to apply, the CCP must be burned in lieu of its normal use or added to a fuel in lieu of its normal use. A fuel merely containing a chemical on the 261.33 list is not automatically a HW. For the fuel to be a waste, the chemical must be a commercial product (of off-spec, etc.) when it was added, and the commercial chemical must not be a fuel itself. | July 15, 1985; 50 FR 28724 (Final HSWA codification rule) |

| Secondary material | Context | Reference |
|---|---|---|
| Gasoline, jet fuel, kerosene, and diesel | Off-spec fuels, including gasoline, jet fuel, kerosene, diesel, etc. that exhibit a HW characteristic and are burned for energy recovery are excluded from regulation under RCRA as CCPs. The RCRA regulations provide that CCPs are not SW when used as fuels if that is their intended purpose. | OSW Correspondence from Petruska to Osborne; February 6, 1995 (Also Bussard to Gable; July 11, 1994) |
| Natural gas pipeline condensate | Off-spec fuels (such as natural gas pipeline condensate) are not considered SW under 261 when burned for energy recovery. While this interpretation has not been altered since 1985, EPA has since attempted to clarify what constitutes legitimate burning for energy recovery and may have caused some confusion as a result...The example of burning off-spec natural gas condensate as a motor fuel as inappropriate or sham burning was a poorly worded example (see first entry in next table*). A more precise example, and one that EPA has found to occur, would be the sale or use of contaminated low energy value "natural gas pipeline condensate" as a motor fuel or fuel additive...It is important to note, however, that energy value is not the sole determinant of whether natural gas condensate is being legitimately burned as a fuel. Of particular relevance is whether the condensate contains toxic constituents not found in normal fuels and whether these constituents are contributing to the recycling objective or are simply being destroyed. | OSW Correspondence from Shapiro to Kinne; April 15, 1994 |
| Propane and butane | CCPs listed in 261.33 as well as non-listed CCPs that exhibit a HW characteristic are not classified as SW when burned for energy recovery if they are themselves fuels. Since propane and butane are materials that are normally both used as fuels, when unused, they can be burned as fuels without being considered SW. | OSW Correspondence from Lowrance to Bremer; December 30, 1992 |

| Secondary material | Context | Reference |
|---|---|---|
| Tank bottoms from petroleum storage terminal | Tank bottoms from a storage terminal not located at a refinery are not by-products. If they were to be reclaimed, they could be considered analogous to a CCP and therefore, they are neither a SW nor a HW, unless used to produce a fuel when they are not normal constituents of fuel. | OSW Correspondence from Laurence to Fox; September 20, 1990 |
| Jet fuel | EPA considers the material's original intended purpose when CCPs are involved. Under the existing regulations, CCPs that are reclaimed are not SW even if the material is used to produce a fuel if that is the materials intended purpose. Thus, off-spec jet fuel, if used to produce a fuel, is not a SW. | OSW Correspondence from Barnes to Haake; July 31,1989 |
| Benzene | In general, off-spec listed CCPs are HW when burned for energy recovery. One exception to this rule is if the off-spec CCP is itself a fuel or normally a component of fuel. For example, off-spec benzene, listed as U019, is normally a component of gasoline, and may be burned for energy recovery without being considered a HW. Note, however, off-spec benzene would not be acceptable as a start-up fuel for an incinerator because the primary purpose of an incinerator is destruction. | RCRA Permit Policy Compendium, Hotline Monthly Report Question, November 1986 |

II. Materials determined to not qualify as fuels and therefore, are solid wastes when burned.

| **Secondary Material** | **Context** | **Reference** |
|---|---|---|
| Off-spec ignitable natural gas condensate burned as motor fuel* **(superseded by 4/15/94 letter)** or reactive jet fuel (U133, hydrazine) burned as conventional fuel oil | Off-spec CCPs burned as fuels (or used as components of fuels) in lieu of their original intended use are SW when burned for recovery. With respect to the issue of what constitutes a normal manner of use for an off-spec CCP that has some Btu value, or the issue of when such a material is used "in lieu of its original intended use" so is a SW and HW, the Agency notes that not every type of burning ostensibly for energy recovery is considered to qualify. Inappropriate modes of burning thus do not render such materials non-wastes. This is because the mode of burning is not at all like these materials original intended use. | February 21, 1991; 56 FR 7184 (Final BIF rule) |
| CCPs | CCPs listed in 261.33 also are wastes when burned as fuels when this is not their normal manner of use. | January 4, 1985; 50 FR 624 (Final DSW rule) |
| Not fuels | Spent materials, sludges, listed by-products and any CCPs listed in 261.33 that are not themselves fuels, are SW when they are burned as fuels, used to produce fuels, or contained in fuels. | April 4, 1983; 48 FR 14485 (Proposed DSW rule) |
| Hazardous secondary materials | All hazardous secondary materials are SW and HW when burned directly as a fuel, or when processed or blended to produce a fuel. The only exceptions are CCPs that are originally intended for use as fuels, including off-spec fuels (e.g., natural gas pipeline condensate generated in the pipeline transmission of natural gas) that are burned for energy recovery. | Guidance Manual on the RCRA Regulation of Recycled HW; March, 1986 (OSWER 9441.00-02) |

| Secondary Material | Context | Reference |
|---|---|---|
| Fuel containing acetaldehyde (on the 261.33 list) | One commenter misread the language to state that if a fuel contains a chemical that is also on the 261.33 list, e.g., acetaldehyde, fuels containing acetaldehyde were SW regardless of the source of the acetaldehyde. This is incorrect. These materials must first be CCPs listed pursuant to 261.33 and must be burned or processed as fuel in lieu of their original intended purpose. We also note that the RCRA Reauthorization language takes precisely this position. | January 4, 1985; 50 FR 624 (Final DSW rule) |
| Acetone-derived solvents | To be exempt under this provision (261.2(c)(2)(ii)), the off-spec solvent would also have to be a fuel itself. The use of acetone-derived solvents, for example, would be precluded by the fuel requirement. | OSW Correspondence from Williams to Keenan; March 19, 1986 |

Attachment 5

Data on Coal and Fuel Oil Characteristics from Previous EPA studies

[an electronic copy of this attachment is not available. A hard copy will be placed in the docket]